

Delimitation of the Lichen Genus *Hypotrachyna* (Vainio) Hale

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The genus *Hypotrachyna*, here proposed as new\*, is an extremely homogeneous group of mainly tropical lichens formerly classified under *Parmelia* subgenus *Parmelia* section *Hypotrachyna* (Hale, M. E. and S. Kurokawa, Contr. U.S. Nat. Herb. 36:160. 1964). It is characterized by sublinear, often elongate, apically subtruncate lobes, adnate to rarely substipitate imperforate apothecia, and dichotomously branched rhizines uniformly distributed over the black lower surface. The upper cortex consists of palisade plectenchyma with a pored epicortex (Hale, M. E. Smithsonian Contr. Bot. 10:9. 1973). As so delimited the genus contains about 110 species occurring mainly at higher elevations in tropical regions. Seventy-seven species are known from tropical America and new combinations for these species are being made elsewhere (Hale, M. E. Smithsonian Contr. Bot., in press). Following are the species known from Africa and Asia and temperate America and Europe.

- Hypotrachyna addita* (Hale) Hale, comb. nov. Basionym: *Parmelia addita* Hale, Phytol. 22:433. 1971.  
*Hypotrachyna adducta* (Nyl.) Hale, comb. nov. Basionym: *Parmelia adducta* Nyl. Flora 68:610. 1885.  
*Hypotrachyna adjuncta* (Hale) Hale, comb. nov. Basionym: *Parmelia adjuncta* Hale, Phytol. 22:434. 1971.  
*Hypotrachyna bostrychodes* (Zahlbr.) Hale, comb. nov. Basionym: *Parmelia bostrychodes* Zahlbr. Ann. Crypt. Exot. 1:203. 1928.  
*Hypotrachyna citrella* (Kurok.) Hale, comb. nov. Basionym: *Parmelia citrella* Kurok. in Hale & Kurokawa, Contr. U.S. Nat. Herb. 36:168. 1964.

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\**Hypotrachyna* (Vainio) Hale, stat. & comb. nov. Basionym: *Parmelia* section *Hypotrachyna* Vainio, Acta Soc. Fauna Flora Fenn. 7(7):38. 1890. Lectotype species: *Hypotrachyna brasiliiana* (Nylander) Hale (Basionym: *Parmelia brasiliiana* Nyl. Flora 68:611. 1885).

- Hypotrachyna crenata* (Kurok.) Hale, comb. nov. Basionym: *Parmelia crenata* Kurok. in Hale & Kurokawa, Contr. U.S. Nat. Herb. 36:168. 1964.
- Hypotrachyna exsecta* (Tayl.) Hale, comb. nov. Basionym: *Parmelia exsecta* Tayl. Lond. Journ. Bot. 6:166. 1847.
- Hypotrachyna fissicarpa* (Kurok.) Hale, comb. nov. Basionym: *Parmelia fissicarpa* Kurok. in Hale & Kurokawa, Contr. U.S. Nat. Herb. 36:175. 1964.
- Hypotrachyna flexilis* (Kurok.) Hale, comb. nov. Basionym: *Parmelia flexilis* Kurok. in Hara, The Flora of Eastern Himalaya, 607. 1966.
- Hypotrachyna incognita* (Kurok.) Hale, comb. nov. Basionym: *Parmelia incognita* Kurok. in Hara, The Flora of Eastern Himalaya, 608. 1966.
- Hypotrachyna ikomae* (Asah.) Hale, comb. nov. Basionym: *Parmelia ikomae* Asah. Journ. Jap. Bot. 28:134. 1953.
- Hypotrachyna infirma* (Kurok.) Hale, comb. nov. Basionym: *Parmelia infirma* Kurok. in Hale & Kurokawa, Contr. U.S. Nat. Herb. 36:179. 1964.
- Hypotrachyna keitauensis* (Asah.) Hale, comb. nov. Basionym: *Parmelia keitauensis* Asah. Journ. Jap. Bot. 26:293. 1951.
- Hypotrachyna kinabalensis* (Hale) Hale, comb. nov. Basionym: *Parmelia kinabalensis* Hale, Journ. Jap. Bot. 40:204. 1964.
- Hypotrachyna kingii* (Hale) Hale, comb. nov. Basionym: *Parmelia kingii* Hale, Journ. Jap. Bot. 43:324. 1968.
- Hypotrachyna leiophylla* (Kurok.) Hale, comb. nov. Basionym: *Parmelia leiophylla* Kurok. in Hale & Kurokawa, Contr. U.S. Nat. Herb. 36:179. 1964.
- Hypotrachyna longiloba* (Magn.) Hale, comb. nov. Basionym: *Parmelia longiloba* Magn. Ark. Bot. 30B(3):7. 1942.
- Hypotrachyna lividescens* (Kurok.) Hale, comb. nov. Basionym: *Parmelia lividescens* Kurok. in Hale & Kurokawa, Contr. U.S. Nat. Herb. 36:181. 1964.
- Hypotrachyna lythgoeana* (Dodge) Hale, comb. nov. Basionym: *Parmelia lythgoeana* Dodge, Ann. Mo. Bot. Garden 46:100. 1959.
- Hypotrachyna majoris* (Vainio) Hale, comb. nov. Basionym: *Parmelia majoris* Vainio, Hedw. 37:(33). 1898.
- Hypotrachyna massartii* (Hue) Hale, comb. nov. Basionym: *Parmelia massartii* Hue, Nouv. Arch. Mus. Paris, ser. 3, 1:168. 1899.
- Hypotrachyna nodakensis* (Asah.) Hale, comb. nov. Basionym: *Parmelia nodakensis* Asah. Journ. Jap. Bot. 34:266. 1959.
- Hypotrachyna orientalis* (Hale) Hale, comb. nov. Basionym: *Parmelia orientalis* Hale, Phytol. 22:435. 1971.
- Hypotrachyna revolutella* (Nyl.) Hale, comb. nov. Basionym: *Parmelia revolutella* Nyl. in Crombie, Journ. Linn. Soc. 16:222. 1878.
- Hypotrachyna rigidula* (Kurok.) Hale, comb. nov. Basionym: *Parmelia rigidula* Kurok. in Hale & Kurokawa, Contr. U.S. Nat. Herb. 36:184. 1964.
- Hypotrachyna scytodes* (Kurok.) Hale, comb. nov. Basionym: *Parmelia scytodes* Kurok. in Hale & Kurokawa, Contr. U.S. Nat. Herb. 36:185. 1964.

- Hypotrachyna scytophylla (Kurok.) Hale, comb. nov. Basionym: *Parmelia scytophylla* Kurok. in Hale & Kurokawa, Contr. U.S. Nat. Herb. 36:185. 1964.
- Hypotrachyna taylorensis (Mitch.) Hale, comb. nov. Basionym: *Parmelia taylorensis* Mitch. Revista Biol. 2:215. 1961.
- Hypotrachyna thryptica (Hale) Hale, comb. nov. Basionym: *Parmelia thryptica* Hale, Bryol. 75:99. 1972.
- Hypotrachyna virginica (Hale) Hale, comb. nov. Basionym: *Parmelia virginica* Hale in Hale & Kurokawa, Contr. U.S. Nat. Herb. 36:186. 1964.
- Hypotrachyna xanthoparmelioides (Hale) Hale, comb. nov. Basionym: *Parmelia xanthoparmelioides* Hale, Phytol. 23:346. 1972.